

**FINANCIAL ASSISTANCE
FUNDING OPPORTUNITY ANNOUNCEMENT**



**U.S. Department of Energy
Office of Science**

**Continuation of Solicitation for the Office of Science Financial
Assistance Program**

Funding Opportunity Number: DE-FG01-06ER06-01

CFDA Number: 81.049

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ISSUE DATE: October 1, 2005

APPLICATION DUE DATE: September 30, 2006, 8:00 pm Eastern Time

NOTE: NEW REQUIREMENTS FOR GRANTS.GOV

Where to Submit

Applications must be submitted through Grants.gov to be considered for award.

Registration Requirements

There are several one-time actions you must complete in order to submit an application through Grants.gov (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contract Registry (CCR), register with the credential provider, and register with Grants.gov). See <http://www.grants.gov/GetStarted>. Use the Grants.gov Organization Registration Checklist at <http://www.grants.gov/assets/OrganizationRegCheck.doc> to guide you through the process. Designating an E-Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in the CCR registration process. Applicants, who are not registered with CCR and Grants.gov, should allow at least 14 days to complete these requirements. It is suggested that the process be started as soon as possible.

Questions

Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov. Part VII of this announcement explains how to submit other questions to the Department of Energy (DOE).

Application Receipt Notices

After an application is submitted, the Authorized Organization Representative (AOR) will receive a series of four e-mails. It is extremely important that the AOR watch for and save each of the emails. It may take up to two (2) business days from application submission to receipt of email Number 2. You will know that your application has reached DOE when the AOR receives email Number 4. You will need the Submission Receipt Number (email Number 1) to track a submission. The titles of the four e-mails are:

Number 1 - Grants.gov Submission Receipt Number

Number 2 - Grants.gov Submission Validation Receipt for Application Number

Number 3 - Grants.gov Grantor Agency Retrieval Receipt for Application Number

Number 4 - Grants.gov Agency Tracking Number Assignment for Application Number

VERY IMPORTANT – Download PureEdge Viewer

In order to download the application package, you will need to install PureEdge Viewer. This small, free program will allow you to access, complete, and submit applications electronically and securely. For a free version of the software, visit the following web site:

<http://www.grants.gov/DownloadViewer>.

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PART I – FUNDING OPPORTUNITY DESCRIPTION

SUMMARY: The Office of Science of the Department of Energy hereby announces its continuing interest in receiving grant applications for support of work in the following program areas: Basic Energy Sciences, High Energy Physics, Nuclear Physics, Advanced Scientific Computing, Fusion Energy Sciences, Biological and Environmental Research, and Energy Research Analyses. On September 3, 1992, DOE published in the Federal Register the Office of Energy Research Financial Assistance Program (now called the Office of Science Financial Assistance Program), 10 CFR Part 605, Final Rule, which contained a solicitation for this program. Information about submission of applications, eligibility, limitations, evaluation and selection processes and other policies and procedures are specified in 10 CFR Part 605.

The following program descriptions are offered to provide more in-depth information on scientific and technical areas of interest to the Office of Science:

1. Basic Energy Sciences

The Basic Energy Sciences (BES) program supports fundamental research in the natural sciences and engineering leading to new and improved energy technologies and to understanding and mitigating the environmental impacts of energy technologies. The four long-term measures of the program are:

- Design, model, fabricate, characterize, analyze, assemble, and use a variety of new materials and structures, including metals, alloys, ceramics, polymers, biomaterials and more – particularly at the nanoscale – for energy-related applications.
- Understand, model, and control chemical reactivity and energy transfer processes in the gas phase, in solutions, at interfaces, and on surfaces for energy-related applications, employing lessons from inorganic, organic, self-assembling, and biological systems.
- Develop new concepts and improve existing methods for solar energy conversion and other major energy research needs identified in the 2003 Basic Energy Sciences Advisory Committee workshop report, Basic Research Needs to Assure a Secure Energy Future.
- Conceive, design, fabricate, and use new instruments to characterize and ultimately control materials.

The science areas and their objectives are as follows:

(a) Materials Sciences and Engineering

The objective of this program is to discover new materials, to characterize these materials, and to increase the fundamental understanding of phenomena, properties, and behavior important to materials that will contribute to improving current energy technologies and developing new energy technologies. Disciplinary areas where basic research is supported include materials physics, condensed matter physics, materials chemistry, and related disciplines where the emphasis is on the science of materials. Product development, demonstration, surveys and process optimization studies for existing commercial materials are not within the scope of this solicitation. Program Contact: Phone (301) 903-3427; Web site - <http://www.sc.doe.gov/bes/dms/index.htm>

(b) Chemical Sciences

The objective of this program is to develop and enhance fundamental understanding in the chemical sciences that contributes to the overall goal of developing new sources of energy and improving processes for using existing energy resources in an efficient and environmentally sound manner. Disciplinary areas where experimental and theoretical/computational basic research are supported include atomic, molecular, and optical sciences; physical, inorganic, and organic chemistry; chemical physics; photochemistry; radiation chemistry; analytical chemistry; separations science; actinide chemistry; and catalysis sciences. Program Contact: Phone (301) 903-5804; Web site - <http://www.sc.doe.gov/bes/chm/chmhome.html>

(c) Geosciences

The objective of this program is to develop a quantitative and predictive understanding of geologic processes related to energy and environmental quality. The program emphasizes cross-cutting basic research that will improve understanding of reactive geochemical transport and other subsurface processes and properties and how to image them using techniques ranging from electrons, x-rays or neutrons to electromagnetic and seismic waves. Applications of this fundamental understanding might include transport of contaminant fluids, hydrocarbons, sequestered carbon dioxide, or performance prediction for repository sites. The emphasis is on the disciplinary areas of geochemistry, geophysics, geomechanics, and hydrogeology with a focus on the upper levels of the earth's crust. Particular emphasis is on processes taking place at the atomic and molecular scale. Specific topical areas receiving emphasis include: high resolution geophysical imaging; rock physics, physics of fluid transport, and fundamental properties and interactions of rocks, minerals, and fluids. Program Contact: Phone (301) 903-4061; Web site - <http://www.sc.doe.gov/bes/geo/geohome.html>

(d) Energy Biosciences

The objective of this program is to generate an understanding of fundamental biological mechanisms in plants and microorganisms. The emphasis is on understanding biological processes that will be the foundation for technology developments related to DOE's mission to achieve environmentally responsible production and conversion of renewable resources for fuels, chemicals, and other energy-enriched products. This program has special requirements for the submission of preapplications, when to submit, and the length of the applications. Applicants are encouraged to contact the program regarding these requirements. Program Contact: Phone - (301) 903-2873; E-mail - energy.biosciences@science.doe.gov; Website - <http://www.science.doe.gov/bes/eb/ebhome.html>

2. High Energy Physics

The primary objectives of this program are to explore the fundamental interactions of matter and energy, including the unseen forms of matter and energy that dominate the universe; to understand the ultimate unification of fundamental forces and particles; to search for possible new dimensions of space; and to investigate the nature of time itself. The research falls into three broad categories: experimental research, theoretical research, and a program of advanced R&D in accelerator and particle detector science and technology. The goal of the R&D program is to enable the design and fabrication of the instrumentation needed for the physics research.

In support of these broad scientific objectives, the High-Energy Physics program has established specific long-term goals that correspond very roughly to current research priorities, and are representative of the program:

- Measure the properties and interactions of the heaviest known particle (the top quark) in order to understand its particular role in the Standard Model.
- Measure the matter-antimatter asymmetry in many particle decay modes with high precision.
- Discover or rule out the Standard Model Higgs particle, thought to be responsible for generating mass of elementary particles.
- Determine the pattern of the neutrino masses and the details of their mixing parameters.
- Confirm the existence of new supersymmetric (SUSY) particles, or rule out the minimal SUSY “Standard Model” of new physics.
- Directly discover, or rule out, new particles which could explain the cosmological “dark matter”.

All grant proposals should address one or more of these goals, or else explain how the proposed research supports the broad scientific objectives outlined above. More information on the program and the scientific research it supports can be found at our website: <http://doe-hep.hep.net/>. Program Contact: (301) 903-3624

3. Nuclear Physics

PLEASE NOTE THE SPECIAL INSTRUCTIONS BELOW.

Office of Science Financial Assistance Program Notice DE-FG01-05ER05-23, Annual Notice for Continuation of Availability of Grants and Cooperative Agreements for Nuclear Physics, was posted to the Office of Science Grants and Contracts Website on August 9, 2005. It may be accessed at the following web address: <http://www.science.doe.gov/grants/FAPN05-23.html>. The purpose of that Notice is to request that all applications for new grants be submitted prior to November 1, 2005, to permit consideration for award in Fiscal Year 2006. If the Applicant is unable to meet this deadline, the application will most likely not be considered for funding until

the following Fiscal Year. Any new applications submitted after November 1 may be submitted in response to this Notice - Continuation of Solicitation for the Office of Science Financial Assistance Program. Additional requirements for applicants to the Office of Nuclear Physics can be found at <http://www.sc.doe.gov/np/grants/grants.html>.

The Nuclear Physics program supports basic research, technical developments and world-class accelerator facilities to expand our fundamental understanding of the interactions and structures of atomic nuclei and nuclear matter, and an understanding of the forces of nature as manifested in nuclear matter. Today, the reach of nuclear physics extends from the quarks and gluons that form the substructure of the once-elementary protons and neutrons, to the most dramatic of cosmic events-supernovae. These and many other diverse activities are driven by five broad questions articulated recently by the Nuclear Science Advisory Committee (NSAC) in the Opportunities in Nuclear Science: A Long-Range Plan for the Next Decade. The four subprogram areas and their objectives are organized around answering these five key questions. Research activities supported by the Office of Nuclear Physics are aligned with and contribute to the overall progress of the following long term performance measures:

Make precision measurements of fundamental properties of the proton, neutron and simple nuclei for comparison with theoretical calculations to provide a quantitative understanding of their quark substructure.

Recreate brief, tiny samples of hot, dense nuclear matter to search for the quark-gluon plasma and characterize its properties.

Investigate new regions of nuclear structure, study interactions in nuclear matter like those occurring in neutron stars, and determine the reactions that created the nuclei of atomic elements inside stars and supernovae.

Measure fundamental properties of neutrinos and fundamental symmetries by using neutrinos from the sun and nuclear reactors and by using radioactive decay measurements.

Contribute to the theoretical understanding of any of the above.

The program is organized into the following four subprograms:

(a) Medium Energy Nuclear Physics

This subprogram supports experimental research primarily at the Thomas Jefferson National Accelerator Facility and with the polarized proton collision program at the Relativistic Heavy Ion Collider (RHIC-Spin), directed at answering the first key question: What is the structure of the nucleon? Detailed investigations of the structure of the nucleon are aimed at understanding how these basic building blocks of matter are constructed from the elementary quarks and gluons of Quantum Chromo-Dynamics (QCD) and how complex interactions among them generate all the properties of the nucleon, including its electromagnetic and spin properties. New knowledge in this area would also allow the nuclear binding force to be described in terms of QCD, thus providing a path for understanding the structure of atomic nuclei from first principles. Program Contact: (301) 903-3904

(b) Heavy Ion Nuclear Physics

This subprogram supports experimental research primarily at the Relativistic Heavy Ion Collider (RHIC) directed at answering the second question: What are the properties of hot nuclear matter? At extremely high temperatures, such as those that existed in the early universe immediately after the "Big Bang," normal nuclear matter is believed to revert to its primeval state called the quark-gluon plasma. This research program aims to recreate extremely small and brief samples of this high energy density phase of matter in the laboratory by colliding heavy nuclei at relativistic energies. At much lower temperatures, nuclear matter passes through another phase transition from a Fermi liquid to a Fermi gas of free roaming nucleons; understanding this phase transition is also a goal of the subprogram. Program Contact: (301) 903-4702

(c) Low Energy Nuclear Physics

This subprogram supports experimental research directed at understanding the remaining three questions: What is the structure of nucleonic matter? Forefront nuclear structure research lies in studies of nuclei at the limits of excitation energy, deformation, angular momentum, and isotopic stability. The properties of nuclei at these extremes are not known and such knowledge is needed to test and drive improvement in nuclear models and theories about the nuclear many-body system. What is the nuclear microphysics of the universe? Knowledge of the detailed nuclear structure, nuclear reaction rates, half-lives of specific nuclei, and the limits of nuclear existence at both the proton and neutron drip lines is crucial for understanding the nuclear astrophysics processes responsible for the production of the chemical elements in the universe, and the explosive dynamics of supernovae. Is there new physics beyond the Standard Model? Studies of fundamental interactions and symmetries, including those of neutrino oscillations, are indicating that our current "Standard Model" theory which explains what the universe is and what holds it together is incomplete, opening up possibilities for new discoveries by precision experiments. Program Contact: (301) 903-6093

(d) Nuclear Theory (including the Nuclear Data subprogram)

Progress in nuclear physics, as in any science, depends critically on improvements in the theoretical techniques and on new insights that will lead to new models and theories that can be applied to interpret experimental data and predict new behavior. The Nuclear Theory program supports theoretical research directed at understanding all five of the central questions identified in the NSAC 2002 Long Range Plan. Included in the theory program are the activities that are aimed at providing information services on critical nuclear data and have as a goal the compilation and dissemination of an accurate and complete nuclear data information base that is readily accessible and user oriented. Program Contact: (301) 903-7878

4. Advanced Scientific Computing Research (ASCR)

The mission of the Advanced Scientific Computing Research Program is to deliver forefront computational and networking capabilities to scientists nationwide that enable them to extend the frontiers of science, answering critical questions that range from nanoscience to astrophysics and include nuclear structure, the function of living cells and the power of fusion energy. Two long term measures for the program are:

1. Demonstrate progress toward developing the mathematics, algorithms, and software that enable effective scientifically critical models of complex systems, including highly nonlinear or uncertain phenomena, or processes that interact on vastly different scales or contain both discrete and continuous elements.
2. Demonstrate progress toward developing, through the Genomes to Life partnership with the Biological and Environmental Research program, the computational science capability to model a complete microbe and a simple microbial community.

In order to accomplish this mission, this program fosters and supports fundamental research in advanced computing research (applied mathematics, computer science and networking), and operates supercomputer, networking, and related facilities to enable the analysis, modeling, simulation, and prediction of complex phenomena important to the Department of Energy.

The Mathematical, Information, and Computational Sciences Subprogram:

This subprogram is responsible for carrying out the primary mission of the ASCR program: discovering, developing, and deploying advanced scientific computing and communications tools and operating the high performance computing and network facilities that researchers need to analyze, model, simulate, and -- most importantly -- predict the behavior of complex natural and engineered systems of importance to the Office of Science and to the Department of Energy.

The computing and advanced networks required to meet Office of Science needs exceed the state-of-the-art by a wide margin. Furthermore, the algorithms, software tools, the software libraries and the distributed software environments needed to accelerate scientific discovery through modeling and simulation are beyond the realm of commercial interest. To establish and maintain DOE's modeling and simulation leadership in scientific areas that are important to its mission, the MICS subprogram employs a broad, but integrated research strategy. The basic research portfolio in applied mathematics and computer science provides the foundation for enabling research activities, which includes efforts to advance high-performance networking, to develop software tools, software libraries and software environments. Results from enabling research supported by the MICS subprogram are used by computational scientists supported by other Office of Science and other DOE programs. Research areas include:

(a) Applied Mathematics

Research on the underlying mathematical understanding and numerical algorithms to enable effective description and prediction of physical systems such as fluids, magnetized plasmas, or protein molecules. This includes, for example, methods for solving large systems of partial differential equations on parallel computers, techniques for choosing optimal values for parameters in large systems with hundreds to hundreds of thousands of parameters, improving our understanding of fluid turbulence, and developing techniques for reliably estimating the errors in simulations of complex physical phenomena.

(b) Computer Science

Research in computer science to enable large scientific applications through advances in massively parallel computing such as scalable and fault tolerant operating systems for parallel computers, programming models, performance modeling and assessment tools, interoperability and infrastructure methodology, and large scale data management and visualization. The development of new computer and computational science techniques will allow scientists to use the most advanced computers without being overwhelmed by the complexity of rewriting their codes with each new generation of high performance architectures.

(c) Network Environment Research

Research to develop and deploy a high-performance network and collaborative technologies to support distributed high-end science applications and large-scale scientific collaborations. The current focus areas include but are not limited to cyber security systems, dynamic bandwidth allocation services, network measurement and analysis, ultra high-speed transport protocols, and advanced application layer services that make it easy for scientists to effectively and efficiently access and use distributed resources, such as advanced services for group collaboration, secure services for remote access of distributed resources, and innovative technologies for sharing, controlling, and managing distributed computing resources. Program Contact: (301) 903-5800

5. Fusion Energy Sciences

The Fusion Energy Sciences (FES) program supports the Department's Energy Security and World-Class Scientific Research Capacity goals. The FES program goal is to advance plasma science, fusion science, and fusion technology -- the knowledge base needed for an economically and environmentally attractive fusion energy source. FES supports basic and applied research, encourages technical cross-fertilization with the broader U.S. science community, and uses international collaboration to accomplish this goal.

The FES program contributes to the Energy Security goal through participation in ITER, an experiment to study and demonstrate the sustained burning of fusion fuel. This proposed international collaboration will provide an unparalleled scientific research opportunity and will test the scientific and technical feasibility of fusion power; ITER is also the penultimate step before a demonstration fusion power plant. Assuming a successful outcome of ongoing ITER negotiations, in Fiscal Year 2005, FES scientists and engineers will be supporting the technical R&D and preparations to start project construction as early as Fiscal Year 2006.

The FES program contributes to the World-Class Scientific Research Capacity goal by managing a program of fundamental research into the nature of fusion plasmas and the means for confining plasma to yield energy. This includes: 1) exploring basic issues in plasma science; 2) developing the scientific basis and computational tools to predict the behavior of magnetically confined plasmas; 3) using the advances in tokamak research to enhance the initiation of the burning plasma physics phase of the FES program; 4) exploring innovative confinement options that offer the potential of more attractive fusion energy sources in the long term; 5) advancing our understanding of high energy density physics and exploring attractive pathways to attaining states of high energy density matter, (in collaboration with NNSA and NSF); 6) developing the cutting edge technologies that enable fusion facilities to achieve their scientific goals; and 7) advancing the science base for innovative materials to establish the economic feasibility and environmental quality of fusion energy.

The overall effort requires operation of a set of unique and diversified experimental facilities, ranging from smaller-scale university experiments to large national facilities that involve extensive collaborations. These facilities provide scientists with the means to test and extend theoretical understanding and computer models—leading ultimately to an improved predictive capability for fusion science. Scientists from the U.S. also participate in leading edge experiments on fusion facilities abroad and conduct comparative studies to supplement the scientific understanding they can obtain from domestic facilities.

Operation of the major fusion facilities will be focused on science issues relevant to ITER design and operation. The United States is an active participant in the International Tokamak Physics Activity (ITPA), which facilitates identification of high priority research for burning plasmas in general, and for ITER specifically, through workshops and assigned tasks. Fabrication of the National Compact Stellarator, an innovative new confinement system that is the product of advances in physics understanding and computer modeling, will continue with a target for the initial operation in Fiscal Year 2009. In addition, there will be continuing efforts to investigate simulations of fusion plasmas in collaboration with the Office of Advanced Scientific Computing Research.

There are three measures that will be used to demonstrate that progress is being made towards meeting the overall program goal over the next ten years. These performance measures are:

1. Predictive Capability for Burning Plasmas: Develop a predictive capability for key aspects of burning plasmas using advances in theory and simulation benchmarked against a comprehensive experimental database of stability, transport, wave-particle interaction, and edge effects.
2. Configuration Optimization: Demonstrate enhanced fundamental understanding of magnetic confinement and improved basis for future burning plasma experiments through research on magnetic confinement configuration optimization.
3. Inertial Fusion Energy and High Energy Density Physics: Develop the fundamental understanding and predictability of high energy density plasmas for potential energy applications.

The Science and Facility Operations Subprograms:

The Science subprogram seeks to develop the physics knowledge base needed to advance the FES program. Research is conducted on small to large-scale confinement devices to study physics issues relevant to fusion and plasma physics and to the production of fusion energy. Experiments on these devices are used to explore the limits of specific confinement concepts, as well as study associated physical phenomena. Specific areas of interest include: (1) reducing plasma energy and particle transport at high densities and temperatures; (2) understanding the physical laws governing stability of high pressure plasmas; (3) investigating plasma wave interactions; (4) studying and controlling impurity particle transport and exhaust in plasmas; and (5) understanding the interaction and coupling among these four issues in a fusion experiment.

Research is also carried out in the following areas: (1) basic plasma science directed at furthering the understanding of fundamental processes in plasmas; (2) theory and modeling to provide the understanding of fusion plasmas necessary for interpreting results from present experiments, planning future experiments, and designing future confinement devices; (3) atomic physics and the development of new diagnostic techniques for support of confinement experiments; (4) innovative confinement concepts; and (5) high energy density physics and issues that support the development of Inertial Fusion Energy (IFE). The high energy density physics necessary for IFE target development is carried out by the Office of Defense Programs in the Department of Energy's National Nuclear Security Administration.

The Enabling R&D Subprogram:

The Enabling R&D subprogram supports the advancement of fusion science in the nearer-term by carrying out research on technological topics that: (1) enable domestic experiments to achieve their full performance potential and scientific research goals; (2) permit scientific exploitation of the performance gains being sought from physics concept improvements; (3) allow the U.S. to enter into international collaborations gaining access to experimental conditions not available domestically; and (4) explore the science underlying these technological advances.

The Enabling R&D subprogram supports pursuit of fusion energy science for the longer-term by conducting research aimed at innovative technologies, designs and materials to point toward an attractive fusion energy vision and affordable pathways for optimized fusion development.

Program Contact: (301) 903-4095

6. Biological and Environmental Research Program

For over 50 years the Biological and Environmental Research (BER) Program has been investing to advance environmental and biomedical knowledge connected to energy. The BER program provides fundamental science to underpin the business thrusts of the Department's strategic plan. Through its support of peer-reviewed research at national laboratories, universities, and private institutions, the program develops the knowledge needed (1) to identify, understand, and anticipate the long-term health and environmental consequences of energy production, development, and use, and (2) to develop biology based solutions that address DOE and National needs.

The following indicators establish specific long term goals in Scientific Advancement that the BER program is committed to, and progress can be measured against.

- Life Sciences: Characterize the multi protein complexes (or the lack thereof) involving a scientifically significant fraction of a microbe's proteins. Develop computational models to direct the use and design of microbial communities to clean up waste, sequester carbon, or produce hydrogen.
- Climate Change Research: Deliver improved climate data & models for policy makers to determine safe levels of greenhouse gases for the Earth system. By 2013, substantially reduce differences between observed temperature and model simulations at subcontinental scales using several decades of recent data.
- Environmental Remediation: By 2015, provide sufficient scientific understanding to allow a significant fraction of DOE sites to incorporate coupled biological, chemical and physical processes for decision making for environmental remediation and long-term stewardship.
- Medical Applications and Measurement Science: Develop intelligent biomimetic electronics that can both sense and correctly stimulate the nervous system and new radiopharmaceuticals for disease diagnosis.

All grant proposals should address one or more of these measures and/or explain how the proposed research supports the broad scientific objectives outlined above. More information on the program and the scientific research it supports can be found at our website <http://www.sc.doe.gov/ober/>.

(a) Life Sciences Research

Research is focused on using DOE's unique resources and facilities to develop fundamental knowledge of biological systems that can be used to address DOE needs in clean energy, carbon sequestration, and environmental cleanup and that will underpin biotechnology based solutions to energy challenges. The objectives are: (1) to develop the experimental and, together with the Advanced Scientific Computing Research program, the computational resources, tools, and technologies needed to understand and predict the complex behavior of complete biological systems, principally microbes and microbial communities; (2) to take advantage of the remarkable high throughput and cost-effective DNA sequencing capacity at the Joint Genome Institute to meet the DNA sequencing needs of the scientific community through competitive, peer-reviewed nominations for DNA sequencing; (3) to understand and

characterize the risks to human health from exposures to low levels of radiation; (4) to understand human genome organization, human gene function and control, and the functional relationships between human genes and proteins at a genomic scale with an emphasis on human chromosomes 5, 16 and 19; (5) to develop and support DOE national user facilities for structural biology at synchrotron and neutron sources; and (6) to anticipate and address ethical, legal, and social implications arising from Office of Science-supported biological research especially synthetic biology and nano technology. Program Contact: (301) 903-5468

(b) Medical Applications and Measurement Sciences

The research is designed to develop the beneficial applications of nuclear and other energy-related technologies for bio-medical research, medical diagnosis and treatment. The objectives are: (1) to utilize innovative radiochemistry to develop new radiotracers for medical research, clinical diagnosis and treatment, (2) to develop the next generation of non-invasive nuclear medicine instrumentation technologies, such as positron emission tomography, (3) to develop advanced imaging detection instrumentation capable of high resolution from the sub-cellular to the whole body level, (4) to utilize the unique resources of the DOE in engineering, physics, chemistry and computer sciences to develop the basic tools to be used in biology and medicine, particularly in imaging sciences, photo-optics and biosensors. Program Contact: (301) 903-3213

(c) Environmental Remediation Research

This research delivers the scientific knowledge, tools, and enabling discoveries in biological and environmental research to reduce the costs, risks, and schedules associated with the cleanup and stewardship of the DOE nuclear weapons complex; to extend the frontiers of biological and chemical methods for remediation; to discover the fundamental mechanisms of contaminant transport in the environment; and to develop cutting edge molecular and numerical tools for investigating environmental processes. Research priorities include bioremediation, contaminant fate and transport, nuclear waste chemistry and advanced treatment options, and the operation of the William R. Wiley Environmental Molecular Sciences Laboratory (EMSL). The research performed for this program will provide fundamental knowledge on a broad range of remediation problems. Program Contact: (301) 903-4902

(d) Climate Change Research

The program seeks to understand the basic physical, chemical, and biological processes of the Earth's atmosphere, land, and oceans and how these processes may be affected by energy production and use. The research is designed to provide data that will enable an objective assessment of the potential for, and the consequences of, human-induced climate change at global and regional scales. It also provides data and models to enable assessments of mitigation options to prevent such a change. The program is comprehensive with an emphasis on: (1) understanding and simulating the radiation balance from the surface of the Earth to the top of the atmosphere (including the effect of clouds, water vapor, trace gases, and aerosols); (2) enhancing and evaluating the quantitative models necessary to predict natural climatic variability and possible human-caused climate change at global and regional scales; (3) understanding and simulating both the net exchange of carbon dioxide between the atmosphere, terrestrial and ocean systems, and the effects of climate change on the global carbon cycle; (4) understanding ecological effects of climate change; (5) improving approaches to integrated assessments of effects of, and options to mitigate, climatic change; and (6) basic research directed at understanding options for sequestering excess atmospheric carbon dioxide in terrestrial ecosystems and the ocean, including potential environmental implications of such sequestration. Program Contact: (301) 903-3281

7. Planning & Analysis

This program develops methodologies and tools designed to improve program management and evaluation. Specific objectives include assessments to identify the outcomes of basic research, impartial and independent evaluations of scientific and technical research efforts, and analyses designed to improve management efficiency and effectiveness. Consistent with these overall objectives, this program conducts numerous research studies to assess directions in science and to identify new policy/programmatic directions that improve the overall management of basic research programs. Program Contact: (202) 586-7203

8. Experimental Program to Stimulate Competitive Research (EPSCoR)

The objective of the EPSCoR program is to enhance the capabilities of EPSCoR states to conduct nationally competitive energy-related research and to develop science and engineering manpower to meet current and future needs in energy-related fields. This program addresses basic research needs across all of the Department of Energy research interests. Research supported by the EPSCoR program is concerned with the same broad research areas addressed by the Office of Science programs that are described in this notice. The EPSCoR program is restricted to applications, which originate in 21 states (Alabama, Alaska, Arkansas, Hawaii, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, South Carolina, South Dakota, Vermont, West Virginia, and Wyoming) and the commonwealth of Puerto Rico. It is anticipated that only a limited number of new competitive research grants will be awarded under this program subject to the availability of funds. Program Contact: (301) 903-3427; Web site - <http://www.sc.doe.gov/bes/EPSCoR/index.htm>

PART II – AWARD INFORMATION

A. TYPE OF AWARD INSTRUMENT.

DOE anticipates awarding both grants and cooperative agreements under this program announcement. If it is determined that a cooperative agreement is the appropriate award instrument, the nature of the Federal involvement will be included in a special award condition.

B. ESTIMATED FUNDING. It is anticipated that approximately \$400 million will be available for grant and cooperative agreement awards in FY 2006. The DOE is under no obligation to pay for any costs associated with the preparation or submission of an application. DOE reserves the right to fund, in whole or in part, any, all, or none of the applications submitted in response to this Notice.

C. MAXIMUM AND MINIMUM AWARD SIZE.

Ceiling (i.e., the maximum amount for an individual award made under this announcement):
NONE

Floor (i.e., the minimum amount for an individual award made under this announcement):
NONE

PART III - ELIGIBILITY INFORMATION

A. ELIGIBLE APPLICANTS.

All types of applicants are eligible to apply, except other Federal agencies, Federally Funded Research and Development Center (FFRDC) Contractors, and nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.

B. COST SHARING

Cost sharing is not required.

C. OTHER ELIGIBILITY REQUIREMENTS.

Federally Funded Research and Development Center (FFRDC) Contractors.

FFRDC researchers are not eligible for an award. A list of the FFRDC contractors is available at <http://www.nsf.gov/sbe/srs/ffrdc/start.htm>. However, an application that includes performance of a portion of the work by a FFRDC contractor will be evaluated and considered for award. (See Section VIII).

PART IV – APPLICATION AND SUBMISSION INFORMATION

A. ADDRESS TO REQUEST APPLICATION PACKAGE.

Application forms and instructions are available at Grants.gov. To access these materials, go to <http://www.grants.gov>, select “Apply for Grants,” and then select “Download Application Package.” Enter the CFDA (81.049) and/or the funding opportunity number (DE-FG01-06ER06-01) located on the cover of this announcement. Select “Download Application Package,” and then follow the prompts to download the application package. To download the instructions, go to “Download Application Package” and select “Instructions.” **NOTE:** You will not be able to download the Application Package unless you have installed PureEdge Viewer.

B. LETTER OF INTENT AND PRE-APPLICATION.

1. Letter of Intent.

Letters of Intent are not required.

2. Pre-application.

Pre-applications are not required.

C. CONTENT AND FORM OF APPLICATION – SF 424 (R&R)

You must complete the mandatory forms and any applicable optional forms (e.g., SF-LLL-Disclosure of Lobbying Activities) in accordance with the instructions on the forms and the additional instructions below. **Files that are attached to the forms must be in Adobe Portable Document Format (PDF) unless otherwise specified in this announcement.**

1. SF 424 (R&R)

Complete this form first to populate data in other forms. Complete all the required fields in accordance with the pop-up instructions on the form. To activate the instructions, turn on the “Help Mode” (Icon with the pointer and question mark at the top of the form). The list of certifications and assurances referenced in Field 18 can be found on the Applicant and Recipient Page at <http://grants.pr.doe.gov>.

2. RESEARCH AND RELATED Other Project Information.

Complete questions 1 through 5 and attach files. The files must comply with the following instructions:

Project Summary/Abstract (Field 6 on the Form)

The project summary/abstract must contain a summary of the proposed activity suitable for dissemination to the publication. It should be a self-contained document that identifies the name of the applicant, the project director/principal investigator(s), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (i.e., benefits, outcomes), and major participants (for collaborative projects). This document must

not include any proprietary or sensitive business information as the Department may make it available to the public. The project summary must not exceed 1 page when printed using standard 8.5" by 11" paper with 1" margins (top, bottom, left and right) with font not smaller than 11 point. To attach a Project Summary/Abstract, click "Add Attachment."

Project Narrative (Field 7 on the form)

The first page of your narrative must include the following information:

Applicant/Institution:

Street Address/City/State/Zip:

Principal Investigator:

Address:

Telephone Number:

Email:

DOE/Office of Science Program Office:

DOE/Office of Science Program Office Technical Contact:

DOE Grant Number (if Renewal or Supplemental Application):

Is this a Collaboration? If yes, please list ALL Collaborating Institutions/PIs* and indicate which ones will also be submitting applications.

*** *Note that collaborating applications must be submitted separately.***

The narrative comprises the research plan for the project. Letters of intent from all non-funded collaborators and short curriculum vitae of all senior personnel must be included in the application. Applications not meeting these requirements will be deemed ineligible during the initial screening process. The major part of the narrative should be devoted to a description and justification of the proposed project, including details of the methods to be used. It should also include a timeline for the major activities of the proposed project, and should indicate which project personnel will be responsible for which activities.

The project narrative must include:

- Project Objectives.
This section should provide a clear, concise statement of the specific objectives/aims of the proposed project.
- Merit Review Criterion Discussion.
The section should be formatted to address each of the merit review criterion and sub-criterion listed in Section V. A. Provide sufficient information so that reviewers will be able to evaluate the application in accordance with these merit review criteria. DOE WILL EVALUATE AND CONSIDER ONLY THOSE APPLICATIONS THAT ADDRESS SEPARATELY EACH OF THE MERIT REVIEW CRITERION AND SUB-CRITERION.

- Evaluation Phase
This section must include a plan and metrics to be used to assess the success of the project.
- Project Performance Site
Indicate the primary site where the work will be performed. If a portion of the work will be performed at any other sites, identify those sites, also.
- Biographical Sketch Appendix
Provide a biographical sketch for the project director/principal investigator (PD/PI) and each senior/key person listed in Section A on the R&R Budget form. Provide the biographical sketch information as an appendix to your project narrative. Do not attach a separate file. The biographical sketch appendix will not count in the project narrative page limitation. The biographical information for each person must not exceed 2 pages when printed on 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right) with font not smaller than 11 point and must include:

Education and Training. Undergraduate, graduate and postdoctoral training, provide institution, major/area, degree and year.

Research and Professional Experience: Beginning with the current position list, in chronological order, professional/academic positions with a brief description.

Publications. Provide a list of up to 10 publications most closely related to the proposed project. For each publication, identify the names of all authors (in the same sequence in which they appear in the publication), the article title, book or journal title, volume number, page numbers, year of publication, and website address if available electronically.

Patents, copyrights and software systems developed may be provided in addition to or substituted for publications.

Synergistic Activities. List no more than 5 professional and scholarly activities related to the effort proposed.

- Current and Pending Support. List all current and pending support. For each organization providing support, show the total award amount for the entire award period (including indirect costs) and the number of person-months per year to be devoted to the project. Concurrent submission of an application to other organizations for simultaneous consideration will not prejudice its review.
- Identification of Potential Conflicts of Interest or Bias in Selection of Reviewers. Provide the following information in this section:

Collaborators and Co-editors: List in alphabetical order all persons, including their current organizational affiliation, who are, or who have been, collaborators or co-authors with you on a research project, book or book article, report, abstract, or paper during the 48 months preceding the submission of this application. Also, list any individuals who are currently, or have been, co-editors with you on a special issue of a journal, compendium,

or conference proceedings during the 24 months preceding the submission of this application. If there are no collaborators or co-editors to report, state "None."

Graduate and Postdoctoral Advisors and Advisees: List the names and current organizational affiliations of your graduate advisor(s) and principal postdoctoral sponsor(s) during the last 5 years. Also, list the names and current organizational affiliations of your graduate students and postdoctoral associates during the past 5 years.

Bibliography & References Cited (Field 8 on the form)

Provide a bibliography of any references cited in the Project Narrative. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. Include only bibliographic citations. Applicants should be especially careful to follow scholarly practices in providing citations for source materials relied upon when preparing any section of the application. In order to reduce the number of files attached to your application, please provide the Bibliography and References Cited information as an appendix to your project narrative. Do not attach a file in field 8. This appendix will not count in the project narrative page limitation.

Facilities & Other Resources (Field 9 on the form) This information is used to assess the capability of the organizational resources, including subawardee resources, available to perform the effort proposed. Identify the facilities to be used (Laboratory, Animal, Computer, Office, Clinical and Other). If appropriate, indicate their capacities, pertinent capabilities, relative proximity, and extent of availability to the project. Describe only those resources that are directly applicable to the proposed work. Describe other resources available to the project (e.g., machine shop, electronic shop) and the extent to which they would be available to the project. In order to reduce the number of files attached to your application, please provide the Facility and Other Resource information as an appendix to your project narrative. Do not attach a file in field 9. This appendix will not count in the project narrative page limitation.

Equipment (Field 10 on the form)

List major items of equipment already available for this project and, if appropriate identify location and pertinent capabilities. In order to reduce the number of files attached to your application, please provide the Equipment information as an appendix to your project narrative. Do not attach a file in field 10. This appendix will not count in the project narrative page limitation.

Other Attachment (Field 11 on the form)

If you need to elaborate on your responses to questions 1-5 on the "Other Project Information" document, provide the information as an appendix to your project narrative. Do not attach a file in field 11.

Also, attach the following files:

No additional files are required.

3. RESEARCH AND RELATED BUDGET.

Complete the Research and Related Budget form in accordance with the instructions on the form (Activate Help Mode to see instructions) and the following instructions. You must complete a separate budget for each year of support requested. The form will generate a cumulative budget for the total project period. You must complete all the mandatory information on the form before the NEXT PERIOD button is activated. You may request funds under any of the categories listed as long as the item and amount are necessary to perform the proposed work, meet all the criteria for allowability under the applicable Federal cost principles, and are not prohibited by the funding restrictions in this announcement (See PART IV, G).

Budget Justification (Field K on the form).

Provide the required supporting information for the following costs (See R&R Budget instructions): equipment; domestic and foreign travel; participant/trainees; material and supplies; publication; consultant services; ADP/computer services; subaward/consortium/contractual; equipment or facility rental/user fees; alterations and renovations; and indirect cost type. Provide any other information you wish to submit to justify your budget request. If cost sharing is required, provide an explanation of the source, nature, amount and availability of any proposed cost sharing. Attach a single budget justification file for the entire project period in Field K. The file automatically carries over to each budget year.

4. SF-LLL Disclosure of Lobbying Activities If applicable, complete SF- LLL.

Applicability: If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the grant/cooperative agreement, you must complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying."

D. SUBMISSIONS FROM SUCCESSFUL APPLICANTS.

The Department anticipates that no additional submissions will be required. However, it reserves the right to request additional or clarifying information for any reason deemed necessary.

E. SUBMISSION DATES AND TIMES.

Application Due Date.

This Notice is published annually and remains in effect until it is succeeded by another issuance by the Office of Science, usually posted after the beginning of the fiscal year. This annual Notice DE-FG01-06ER06-01 succeeds Notice DE-FG01-05ER05-01, which was published September 30, 2004. You are encouraged to transmit your application well in advance before the end of the Fiscal Year on September 30, 2006.

F. GOVERNMENTAL REVIEW

This program is not subject to Executive Order 12372 – Intergovernmental Review of Federal Programs.

G. FUNDING RESTRICTIONS.

Cost Principles. Costs must be allowable in accordance with the applicable Federal cost principles referenced in 10 CFR part 600.

Pre-award Costs. Recipients may charge to an award resulting from this announcement pre-award costs that were incurred within the ninety (90) calendar day period immediately preceding the effective date of the award, if the costs are allowable in accordance with the applicable Federal cost principles referenced in 10 CFR part 600. Recipients must obtain the prior approval of the contracting officer for any pre-award costs that are for periods greater than this 90 day calendar period.

Pre-award costs are incurred at the applicant's risk. DOE is under no obligation to reimburse such costs if for any reason the applicant does not receive an award or if the award is made for a lesser amount than the applicant expected.

H. OTHER SUBMISSION AND REGISTRATION REQUIREMENTS

1. Where to Submit.

- **APPLICATIONS MUST BE SUBMITTED THROUGH GRANTS.GOV TO BE CONSIDERED FOR AWARD.** Submit electronic applications through the "Apply for Grants" function at www.Grants.gov. If you have problems completing the registration process or submitting your application, call Grants.gov at 1-800-518-4726 or send an email to support@grants.gov.

2. Registration Process.

You must COMPLETE the one-time registration process (all steps) before you can submit your first application through Grants.gov (See www.grants.gov/GetStarted). **We recommend that you start this process at least two weeks before the application due date.** It may take 14 days or more to complete the entire process. Use the Grants.gov Organizational Registration Checklists at: <http://www.grants.gov/assets/OrganizationRegCheck.doc> to guide you through the process. **IMPORTANT:** During the CCR registration process, you will be asked to designate an E-Business Point of Contact (EBIZ POC). The EBIZ POC must obtain a special password called “Marketing Partner identification Number” (MPIN).

Part V - APPLICATION REVIEW INFORMATION

A. CRITERIA

1. Initial Review Criteria.

Prior to a comprehensive merit evaluation, DOE will perform an initial review in accordance with 10 CFR 605.10(b).

2. Merit Review Criteria.

Applications will be subjected to scientific merit review (peer review) and will be evaluated against the following evaluation criteria listed below as codified at 10 CFR Part 605.10 (d):

1. Scientific and/or Technical Merit of the Project,
2. Appropriateness of the Proposed Method of Approach,
3. Competency of Applicant's Personnel and Adequacy of Proposed Resources,
4. Reasonableness and Appropriateness of the Proposed Budget.

The external peer reviewers are selected with regard to both their scientific expertise and the absence of conflict-of-interest issues. Non-federal reviewers may be used, and submission of an application constitutes agreement that this is acceptable to the investigator(s) and the submitting institution.

B. REVIEW AND SELECTION PROCESS.

1. Merit Review.

Applications will be subjected to formal merit review (peer review) and will be evaluated against the evaluation criteria codified at 10 CFR 605.10(d) listed above, as well as the additional criteria listed above.

2. Selection.

The Selection Official will consider the merit review recommendation, program policy factors, and the amount of funds available.

3. Discussions and Award.

The Government may enter into discussions with a selected applicant for any reason deemed necessary, including but not limited to: (1) the budget is not appropriate or reasonable for the requirement; (2) only a portion of the application is selected for award; (3) the Government needs additional information to determine that the recipient is capable of complying with the requirements in 10 CFR part 600 and 605; and/or (4) special terms and conditions are required. Failure to resolve satisfactorily the issues identified by the Government will preclude award to the applicant.

C. ANTICIPATED NOTICE OF SELECTION AND AWARD DATES.

DOE is striving to make awards within eight months. The time interval begins on the date applications are due or the date the application is received, if there is no specified due date/deadline.

Part VI - AWARD ADMINISTRATION INFORMATION

A. AWARD NOTICES.

1. Notice of Selection.

- DOE will notify applicants selected for award. This notice of selection is not an authorization to begin performance. (See Part IV.G with respect to the allowability of pre-award costs.)

Organizations whose applications have not been selected will be advised as promptly as possible. This notice will explain why the application was not selected.

2. Notice of Award.

- A Notice of Financial Assistance Award issued by the contracting officer is the authorizing award document. It normally includes, either as an attachment or by reference: 1. Special Terms and Conditions; 2. Applicable program regulations, if any; 3. Application as approved by DOE; 4. DOE assistance regulations at 10 CFR part 600, or, for Federal Demonstration Partnership (FDP) institutions, the FDP terms and conditions; 5. National Policy Assurances to Be Incorporated As Award Terms; 6. Budget Summary; and 7. Federal Assistance Reporting Checklist, which identifies the reporting requirements.

B. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS.

1. Administrative Requirements.

The administrative requirements for DOE grants and cooperative agreements are contained in 10 CFR Part 600 and 10 CFR Part 605 (See: <http://ecfr.gpoaccess.gov>), except for grants made to Federal Demonstration Partnership (FDP) institutions. The FDP terms and conditions and DOE FDP agency specific terms and conditions are located on the National Science Foundation web site at http://www.nsf.gov/awards/managing/fed_dem_part.jsp.

2. Special Terms and Conditions and National Policy Requirements.

Special Terms and Conditions and National Policy Requirements.

The DOE Special Terms and Conditions for Use in Most Grants and Cooperative Agreements are located at <http://grants.pr.doe.gov>. The National Policy Assurances To Be Incorporated As Award Terms are located at <http://grants.pr.doe.gov>.

Intellectual Property Provisions.

The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at http://www.gc.doe.gov/techtrans/sipp_matrix.html.

C. REPORTING.

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F4600.2, attached to the award agreement.

PART VII - QUESTIONS/AGENCY CONTACTS

QUESTIONS

Questions regarding the content of the announcement must be submitted through the “Submit Question” feature of the DOE Industry Interactive Procurement System (IIPS) at <http://e-center.doe.gov>. Locate the program announcement on IIPS and then click on the “Submit Question” button. Enter required information. You will receive an electronic notification that your question has been answered. DOE will try to respond to a question within 3 business days, unless a similar question and answer have already been posted on the website.

Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov. DOE cannot answer these questions.

Questions regarding the Program Announcement (**administrative**) should be directed to Lori Jernigan, email: Lori.Jernigan@science.doe.gov

Questions regarding the specific program areas/technical requirements should be directed to the points of contact listed for each program office within the notice and not to the notice administrative contact.

PART VIII - OTHER INFORMATION

A. MODIFICATIONS.

Notices of any modifications to this announcement will be posted on Grants.gov and the DOE Industry Interactive Procurement System (IIPS). You can receive an email when a modification or an announcement message is posted by joining the mailing list for this announcement through the link in IIPS. When you download the application at Grants.gov, you can also register to receive notifications of changes through Grants.gov.

B. GOVERNMENT RIGHT TO REJECT OR NEGOTIATE.

DOE reserves the right, without qualification, to reject any or all applications received in response to this announcement and to select any application, in whole or in part, as a basis for negotiation and/or award.

C. COMMITMENT OF PUBLIC FUNDS.

The Contracting Officer is the only individual who can make awards or commit the Government to the expenditure of public funds. A commitment by other than the Contracting Officer, either explicit or implied, is invalid.

D. PROPRIETARY APPLICATION INFORMATION.

Patentable ideas, trade secrets, proprietary or confidential commercial or financial information, disclosure of which may harm the applicant, should be included in an application only when such information is necessary to convey an understanding of the proposed project. The use and disclosure of such data may be restricted, provided the applicant includes the following legend on the first page of the project narrative and specifies the pages of the application which are to be restricted:

“The data contained in pages _____ of this application have been submitted in confidence and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that if this applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data herein to the extent provided in the award. This restriction does not limit the government’s right to use or disclose data obtained without restriction from any source, including the applicant.”

To protect such data, each line or paragraph on the pages containing such data must be specifically identified and marked with a legend similar to the following:

“The following contains proprietary information that (name of applicant) requests not be released to persons outside the Government, except for purposes of review and evaluation.”

E. EVALUATION AND ADMINISTRATION BY NON-FEDERAL PERSONNEL.

In conducting the merit review evaluation, the Government may seek the advice of qualified non-Federal personnel as reviewers. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The applicant, by submitting its application, consents to the use of non-Federal reviewers/administrators. Non-Federal reviewers must sign conflict of interest and non-disclosure agreements prior to reviewing an application. Non-Federal personnel conducting administrative activities must sign a non-disclosure agreement.

F. INTELLECTUAL PROPERTY DEVELOPED UNDER THIS PROGRAM.

Patent Rights. The government will have certain statutory rights in an invention that is conceived or first actually reduced to practice under a DOE award. 42 U.S.C. 5908 provides that title to such inventions vests in the United States, except where 35 U.S.C. 202 provides otherwise for nonprofit organizations or small business firms. However, the Secretary of Energy may waive all or any part of the rights of the United States subject to certain conditions. (See “Notice of Right to Request Patent Waiver” in paragraph G below.)

Rights in Technical Data. Normally, the government has unlimited rights in technical data created under a DOE agreement. Delivery or third party licensing of proprietary software or data developed solely at private expense will not normally be required except as specifically negotiated in a particular agreement to satisfy DOE’s own needs or to insure the commercialization of technology developed under a DOE agreement.

G. NOTICE OF RIGHT TO REQUEST PATENT WAIVER.

Applicants may request a waiver of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of an agreement as a result of this announcement, in advance of or within 30 days after the effective date of the award. Even if such advance waiver is not requested or the request is denied, the recipient will have a continuing right under the award to request a waiver of the rights of the United States in identified inventions, i.e., individual inventions conceived or first actually reduced to practice in performance of the award. Any patent waiver that may be granted is subject to certain terms and conditions in 10 CFR 784.

Domestic small businesses and domestic nonprofit organizations will receive the patent rights clause at 37 CFR 401.14, i.e., the implementation of the Bayh-Dole Act. This clause permits domestic small business and domestic nonprofit organizations to retain title to subject inventions. Therefore, small businesses and nonprofit organizations do not need to request a waiver.

**H. NOTICE REGARDING ELIGIBLE/INELIGIBLE ACTIVITIES.
PARTICIPATION BY FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTER
(FFRDC) CONTRACTORS**

Federally Funded Research and Development Center (FFRDC) contractors are not eligible for an award under this announcement, but they may be proposed as a team member subject to the following guidelines:

Authorization for non-DOE FFRDCs. The Federal agency sponsoring the FFRDC contractor must authorize in writing the use of the FFRDC contractor on the proposed project and this authorization must be submitted with the application. The use of a FFRDC contractor must be consistent with the contractor’s authority under its award and must not place the FFRDC contractor in direct competition with the private sector.

Authorization for DOE FFRDCs. The cognizant contracting officer must authorize in writing the use of a DOE FFRDC contractor on the proposed project and this authorization must be submitted with the application. The following wording is acceptable for this authorization.

“Authorization is granted for the _____ Laboratory to participate in the proposed project. The work proposed for the laboratory is consistent with or complimentary to the missions of the laboratory, will not adversely impact execution of the DOE assigned programs at the laboratory, and will not place the laboratory in direct competition with the domestic private sector.”

Value/Funding. The value of, and funding for, the FFRDC contractor portion of the work will not normally be included in the award to a successful applicant. Usually, DOE will fund a DOE FFRDC contractor through the DOE field work proposal system and other FFRDC contractors through an interagency agreement with the sponsoring agency.

Responsibility. The applicant, if successful, will be the responsible authority regarding the settlement and satisfaction of all contractual and administrative issues, including but not limited to, disputes and claims arising out of any agreement between the applicant and the FFRDC contractor.